

SONY®

4-258-974-11(1)

Digital Still Camera



AVCHD HDMI

DSC-HX3/HX5/HX5V

Instruction Manual

Cyber-shot

GB

English

Owner's Record

The model and serial numbers are located on the bottom. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. DSC-HX3/HX5/HX5V

Serial No. _____

WARNING

To reduce fire or shock hazard, do not expose the unit to rain or moisture.

IMPORTANT SAFETY INSTRUCTIONS -SAVE THESE INSTRUCTIONS DANGER TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, CAREFULLY FOLLOW THESE INSTRUCTIONS

If the shape of the plug does not fit the power outlet, use an attachment plug adaptor of the proper configuration for the power outlet.

CAUTION

Battery pack

If the battery pack is mishandled, the battery pack can burst, cause a fire or even chemical burns. Observe the following cautions.

- Do not disassemble.
- Do not crush and do not expose the battery pack to any shock or force such as hammering, dropping or stepping on it.
- Do not short circuit and do not allow metal objects to come into contact with the battery terminals.
- Do not expose to high temperature above 60°C (140°F) such as in direct sunlight or in a car parked in the sun.
- Do not incinerate or dispose of in fire.
- Do not handle damaged or leaking lithium ion batteries.

- Be sure to charge the battery pack using a genuine Sony battery charger or a device that can charge the battery pack.
- Keep the battery pack out of the reach of small children.
- Keep the battery pack dry.
- Replace only with the same or equivalent type recommended by Sony.
- Dispose of used battery packs promptly as described in the instructions.

Battery charger

Even if the CHARGE lamp is not lit, the battery charger is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet (wall socket). If some trouble occurs while using the battery charger, immediately shut off the power by disconnecting the plug from the wall outlet (wall socket).

For Customers in the U.S.A. and Canada

RECYCLING LITHIUM-ION BATTERIES

Lithium-Ion batteries are recyclable.

You can help preserve our environment by returning your used rechargeable batteries to the collection and recycling location nearest you.



For more information regarding recycling of rechargeable batteries, call toll free 1-800-822-8837, or visit <http://www.rbrc.org/>

Caution: Do not handle damaged or leaking Lithium-Ion batteries.

Battery pack

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This Class B digital apparatus complies with Canadian ICES-003.

For Customers in the U.S.A.

UL is an internationally recognized safety organization.
The UL Mark on the product means it has been UL Listed.

If you have any questions about this product, you may call:

Sony Customer Information Center
1-800-222-SONY (7669)

The number below is for the FCC related matters only.

Regulatory Information

Declaration of Conformity

Trade Name: SONY
Model No.: DSC-HX3, DSC-HX5V
Responsible Party: Sony Electronics Inc.
Address: 16530 Via Esprillo,
San Diego, CA 92127 U.S.A.
Telephone No.: 858-942-2230

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The supplied interface cable must be used with the equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

For Customers in Europe



Hereby, Sony Corporation, declares that this DSC-HX5V Digital Still Camera is in compliance with the essential requirements and other relevant provisions of the Directive 1999/5/EC. For details, please access the following URL:

<http://www.compliance.sony.de/>

Notice for the customers in the countries applying EU Directives

The manufacturer of this product is Sony Corporation, 1-7-1 Konan Minato-ku Tokyo, 108-0075 Japan. The Authorized Representative for EMC and product safety is Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Germany. For any service or guarantee matters please refer to the addresses given in separate service or guarantee documents.

This product has been tested and found compliant with the limits set out in the R&TTE Directive for using connection cables shorter than 3 meters (9.8 feet).

Attention

The electromagnetic fields at the specific frequencies may influence the picture and sound of this unit.

Notice

If static electricity or electromagnetism causes data transfer to discontinue midway (fail), restart the application or disconnect and connect the communication cable (USB, etc.) again.

Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)



This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product,

please contact your local Civic Office, your household waste disposal service or the shop where you purchased the product.

Disposal of waste batteries (applicable in the European Union and other European countries with separate collection systems)



This symbol on the battery or on the packaging indicates that the battery provided with this product shall not be treated as household waste.

On certain batteries this symbol might be used in combination with a chemical symbol. The chemical symbols for mercury (Hg) or lead (Pb) are added if the battery contains more than 0.0005% mercury or 0.004% lead.

By ensuring these batteries are disposed of correctly, you will help prevent potentially negative consequences for the environment and human health which could otherwise be caused by inappropriate waste handling of the battery. The recycling of the materials will help to conserve natural resources.



In case of products that for safety, performance or data integrity reasons require a permanent connection with an incorporated battery, this battery should be replaced by qualified service staff only. To ensure that the battery will be treated properly, hand over the product at end-of-life to the applicable collection point for the recycling of electrical and electronic equipment.

For all other batteries, please view the section on how to remove the battery from the product safely.

Hand the battery over to the applicable collection point for the recycling of waste batteries. For more detailed information about recycling of this product or battery, please contact your local Civic Office, your household waste disposal service or the shop where you purchased the product.

Notice for customers in the United Kingdom

A moulded plug complying with BS 1363 is fitted to this equipment for your safety and convenience.

Should the fuse in the plug supplied need to be replaced, a fuse of the same rating as the supplied one and approved by ASTA or BSI to BS 1362, (i.e., marked with an  or  mark) must be used.

If the plug supplied with this equipment has a detachable fuse cover, be sure to attach the fuse cover after you change the fuse. Never use the plug without the fuse cover. If you should lose the fuse cover, please contact your nearest Sony service station.

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Refer to “Cyber-shot Handbook” (PDF) on supplied CD-ROM

For details on advanced operations, please read “Cyber-shot Handbook” (PDF) on the CD-ROM (supplied) using a computer.

Refer to “Cyber-shot Handbook” for in-depth instructions on shooting or viewing images and connecting the camera to your computer, printer or TV (page 22).





Checking the accessories supplied

- Battery charger BC-CSGD/BC-CSGE (1)
- Power cord (mains lead) (not supplied in the USA and Canada) (1)
- Rechargeable battery pack NP-BG1 (1)/Battery case (1)
- USB, A/V cable for multi-use terminal (1)
- HDMI adaptor (1)
- Wrist strap (1)
- CD-ROM (1)
 - Cyber-shot application software
 - “Cyber-shot Handbook”
- Instruction Manual (this manual) (1)

Notes on using the camera

Changing the language setting


The screen language setting, press the MENU button, then select

 (Settings) →  (Main Settings) → [Language Setting].

Internal memory and memory card back up

Do not turn off the camera, remove the battery pack, or remove the memory card while the access lamp is lit. Otherwise, the internal memory data or the memory card may be damaged. Be sure to make a backup copy to protect your data.

Functions built into this camera

- This manual describes the functions of GPS-compatible/incompatible devices, TransferJet-compatible/incompatible devices, 1080 60i-compatible devices and 1080 50i-compatible devices.
 - To determine whether your camera supports the GPS function, check the model name of your camera.
GPS-compatible: DSC-HX5V
GPS-incompatible: DSC-HX3/HX5
 - To check if your camera supports the TransferJet function, and whether it is a 1080 60i-compatible device or 1080 50i-compatible device, check for the following marks on the bottom of the camera.
TransferJet-compatible device:  (TransferJet)
1080 60i-compatible device: 60i
1080 50i-compatible device: 50i
- In an airplane, make sure to turn off the camera following cabin announcements.

On GPS-compatible devices (DSC-HX5V only)

- Use GPS in accordance with regulations of countries and regions where you use it.
- The direction or location information will be recorded to your camera in the default setting. If you do not record the direction or location information, set [GPS setting] to [Off].

On database files

When you insert a memory card without a database file into the camera and turn on the power, part of the memory card capacity is used to automatically create a database file. It may take some time until you can perform the next operation.

Notes on recording/playback

- When you use a memory card with this camera for the first time, it is recommended to format the card using the camera for stable performance of the memory card before shooting.
Note that formatting permanently erases all data on the memory card, and is unrecoverable. Save precious data on a computer, etc.
- If you repeatedly record/delete images, fragmentation of data may occur on the memory card. Movies may not be able to be saved or recorded. In such a case, save your images to a PC or other storage location, then [Format].
- Before you start recording, make a trial recording to make sure that the camera is working correctly.
- The camera is neither dust-proof, nor splash-proof, nor water-proof. Read “Precautions” (page 26) before operating the camera.

- Avoid exposing the camera to water. If water enters inside the camera, a malfunction may occur. In some cases, the camera cannot be repaired.
- Do not aim the camera at the sun or other bright light. It may cause the malfunction of the camera.
- Do not use the camera near a location that generates strong radio waves or emits radiation. Otherwise, the camera may not properly record or play back images.
- Using the camera in sandy or dusty locations may cause malfunctions.
- If moisture condensation occurs, remove it before using the camera.
- Do not shake or strike the camera. It may cause a malfunction and you may not be able to record images. Furthermore, the recording media may become unusable or image data may be damaged.
- Clean the flash surface before use. The heat of flash emission may cause dirt on the flash surface to become discolored or to stick to the flash surface, resulting in insufficient light emission.

Notes when importing AVCHD movies to a computer

When importing AVCHD format movies to a computer, use “PMB” in the supplied CD-ROM (for Windows users), or “iMovie” (bundled with Macintosh, for Macintosh users).

Notes on the LCD screen and lens

- The LCD screen is manufactured using extremely high-precision technology so over 99.99% of the pixels are operational for effective use. However, some tiny black and/or bright dots (white, red, blue or green) may appear on the LCD screen. These dots are a normal result of the manufacturing process, and do not affect the recording.
- When the battery level becomes low, the lens might stop moving. Insert a charged battery pack and turn on the camera again.

On camera's temperature

Your camera and battery may get warm due to continuous use, but it is not a malfunction.

On the overheat protection

Depending on the camera and battery temperature, you may be unable to record movies or the power may turn off automatically to protect the camera. A message will be displayed on the LCD screen before the power turns off or you can no longer record movies.

On image data compatibility

- The camera conforms with DCF (Design rule for Camera File system) universal standard established by JEITA (Japan Electronics and Information Technology Industries Association).
- Sony does not guarantee that the camera will play back images recorded or edited with other equipment, or that other equipment will play back images recorded with the camera.

Notes when playing movies on other devices

- This camera uses MPEG-4 AVC/H.264 High Profile for AVCHD format recording. Movies recorded in AVCHD format with this camera cannot be played by the following devices.
 - Other devices compatible with AVCHD format that does not support High Profile
 - Devices incompatible with the AVCHD format
- This camera also uses MPEG-4 AVC/H.264 Main Profile for MP4 format recording. For this reason, movies recorded in MP4 format with this camera cannot be played on devices other than those that support MPEG-4 AVC/H.264.
- Discs recorded with HD image quality (high definition) can be played back only on AVCHD format-compatible devices. DVD-based players or recorders cannot play back HD image quality discs, as they are incompatible with the AVCHD format. Also, DVD-based players or recorders may fail to eject HD image quality discs.

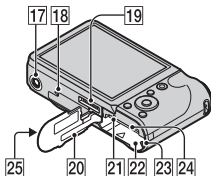
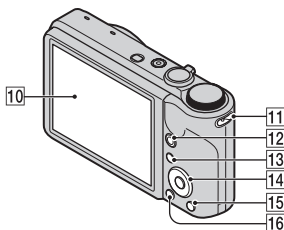
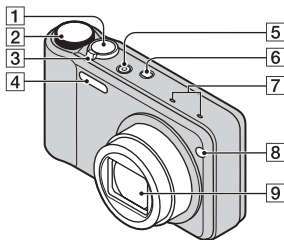
Warning on copyright

Television programs, films, videotapes, and other materials may be copyrighted. Unauthorized recording of such materials may be contrary to the provisions of the copyright laws.

No compensation for damaged content or recording failure

Sony cannot compensate for failure to record or loss or damage of recorded content due to a malfunction of the camera or recording media, etc.

Identifying parts

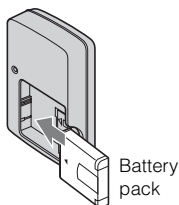


- 1 Shutter button
- 2 Mode dial
- 3 For shooting: W/T (Zoom) lever
For viewing: Q (Playback zoom) lever/Index lever
- 4 Flash
- 5 ON/OFF (Power) button
- 6 (Burst/Bracket) button
- 7 Microphone
- 8 Self-timer lamp/Smile Shutter lamp/AF illuminator
- 9 Lens
- 10 LCD screen
- 11 Hook for wrist strap
- 12 MOVIE (Movie) button
- 13 (Playback) button
- 14 Control button
Menu on: ▲/▼/◀/▶/●
Menu off: DISP/☺/☹/⚡
- 15 (Delete) button
- 16 MENU button
- 17 Tripod receptacle
 - Use a tripod with a screw less than 5.5 mm (7/32 inches) long. Otherwise, you cannot firmly secure the camera, and damage to the camera may occur.
- 18 Speaker
- 19 Multi connector
- 20 Battery/memory card cover
- 21 Access lamp
- 22 Battery insertion slot
- 23 Battery eject lever
- 24 Memory card slot
- 25 (TransferJet™) mark

Charging the battery pack

1 Insert the battery pack into the battery charger.

- You can charge the battery even when it is partially charged.



2 Connect the battery charger to the wall outlet (wall socket).

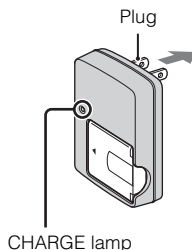
If you continue charging the battery pack for about one more hour after the CHARGE lamp turns off, the charge will last slightly longer (full charge).

CHARGE lamp

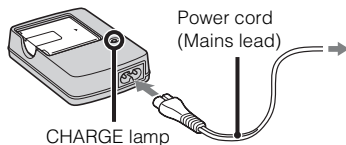
Lit: Charging

Off: Charging finished
(normal charge)

For customers in the USA and Canada



For customers in countries/regions other than the USA and Canada



3 When charging is finished, disconnect the battery charger.

■ Charging time

Full charge time	Normal charge time
Approx. 330 min.	Approx. 270 min.

Notes

- The table above shows the time required to charge a fully depleted battery pack at a temperature of 25 °C (77 °F). Charging may take longer depending on conditions of use and circumstances.
- Connect the battery charger to the nearest wall outlet (wall socket).
- When charging is finished, disconnect the power cord (mains lead) from the wall outlet (wall socket), and remove the battery pack from the battery charger.
- Be sure to use the battery pack or the battery charger of the genuine Sony brand.

■ Battery life and number of still images you can record/view

	Battery life (min.)	No. of Images
Recording	Approx. 155	Approx. 310
Viewing	Approx. 260	Approx. 5200

Notes

- The number of still images that can be recorded is based on the CIPA standard, and is for shooting under the following conditions.
(CIPA: Camera & Imaging Products Association)
 - DISP (Screen Display Settings) is set to [Normal].
 - Shooting once every 30 seconds.
 - The zoom is switched alternately between the W and T ends.
 - The flash strobes once every two times.
 - The power turns on and off once every ten times.
 - A fully charged battery pack (supplied) is used at an ambient temperature of 25 °C (77 °F).
 - Using Sony “Memory Stick PRO Duo” media (sold separately).
- Figures are calculated based on optimum GPS triangulating conditions. The number of recordable images/time may vary depending on GPS triangulating status (DSC-HX5V only).

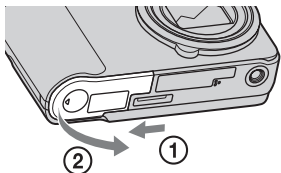


Using the camera abroad

You can use the camera and the battery charger (supplied) in any country or region where the power supply is within 100 V to 240 V AC, 50/60 Hz. Do not use an electronic transformer (travel converter). This may cause a malfunction.

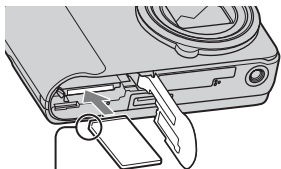
Inserting the battery pack/a memory card (sold separately)

- 1** Open the cover.



- 2** Insert the memory card (sold separately).

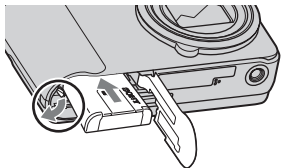
With the notched corner facing as illustrated, insert the memory card until it clicks into place.



Ensure the notched corner faces correctly.

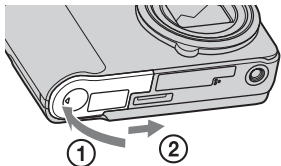
- 3** Insert the battery pack.

Check the direction of the battery, insert the battery pack while pressing the battery eject lever in the direction of the arrow. Insert the battery until the battery eject lever is locked.



- 4** Close the cover.

Closing the cover with the battery inserted incorrectly may damage the camera.



■ Memory cards that you can use

- The following memory cards are compatible with this camera: “Memory Stick PRO Duo” media, “Memory Stick PRO-HG Duo” media, “Memory Stick Duo” media, SD memory cards, SDHC memory cards and SDXC memory cards. Operation with all memory cards is not assured. MultiMediaCard is not compatible.

Images recorded on SDXC memory cards cannot be played back or captured

on non-exFAT-compatible computers, AV components, etc., connected to this camera by USB cable. Check that the connected devices are compatible with exFAT beforehand. If you connect a device that is not compatible with exFAT, the screen for initialization may appear. Never execute initialization otherwise all recorded contents will be lost.

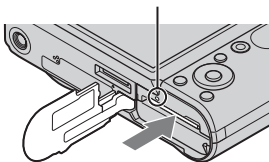
(exFAT is the file system used in SDXC memory cards.)

- In this manual, “Memory Stick PRO Duo” media, “Memory Stick PRO-HG Duo” media and “Memory Stick Duo” media are called “Memory Stick Duo” media and SD memory cards, SDHC memory cards and SDXC memory cards are called SD memory cards.
- When recording movies, it is recommended that you use the following memory cards:
 - **MEMORY STICK PRO DUO** (Mark2) (“Memory Stick PRO Duo” (Mark2) media)
 - **MEMORY STICK PRO-HG DUO** (“Memory Stick PRO-HG Duo” media)
 - SD memory card, SDHC memory card or SDXC memory card (Class 4 or faster)

For details on the number of images/time that can be recorded, see page 25.

■ To remove the memory card

Access lamp





Make sure that the access lamp is not lit, then push the memory card in once.

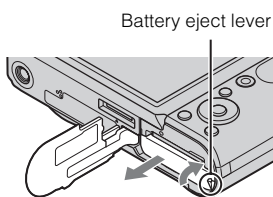
Note

- Never remove the memory card/battery pack when the access lamp is lit. This may cause damage to data in the memory card/internal memory.

■ When there is no memory card inserted

Images are stored in the camera's internal memory (approximately 45 MB). To copy images from the internal memory to a memory card, insert the memory card in the camera, then select MENU →  (Settings) →  (Memory Card Tool) → [Copy].

■ To remove the battery pack



Slide the battery eject lever. Be sure not to drop the battery pack.

■ Checking the remaining battery charge

A remaining charge indicator appears on the LCD screen.



Notes

- It takes about one minute until the correct remaining charge indicator appears.
- The remaining charge indicator may not be correct under certain circumstances.
- When [Power Save] is set to [Stamina] or [Standard], if you do not operate the camera running on a battery pack for a certain amount of time, the brightness level on the LCD screen becomes dark, and then the camera automatically turns off to prevent wearing down the battery pack (Auto Power off).
- To prevent terminal contamination, or short-circuiting with metallic objects, etc., always carry or store the battery in the supplied case.

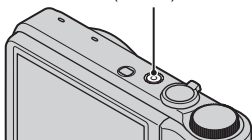
Setting the clock

1 Press the ON/OFF (Power) button.

The camera is turned on.

- It may take time for the power to turn on and allow operation.

ON/OFF (Power) button

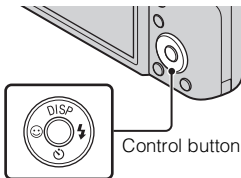


2 Select a setting item with ▲/▼ on the control button, then press ●.

Date & Time Format: Selects the date and time display format.

Daylight Savings: Selects Daylight Savings On/Off.

Date & Time: Sets the date and time.



3 Set the numeric value and desired settings with ▲/▼/◀/▶, then press ●.

- Midnight is indicated as 12:00 AM, and noon as 12:00 PM.

4 Follow the instructions on the screen. Select your desired area with ▲/▼/◀/▶ on the control button, then press ●.

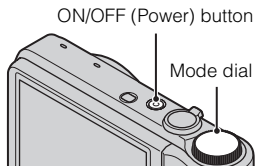
5 Select [OK], then press ●.

■ Setting the date and time again

Press the MENU button, then select  (Settings) →  (Clock Settings).

Shooting still images

- 1 Set the mode dial to **i** (Intelligent Auto Adjustment), then press the ON/OFF (Power) button.



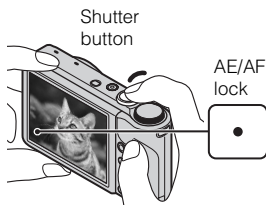
- 2 Hold the camera steady as illustrated.

- Turn the W/T (zoom) lever to (T) to zoom in, and to (W) to zoom out.



- 3 Press the shutter button halfway down to focus.

When the image is in focus, a beep sounds and the ● indicator lights.




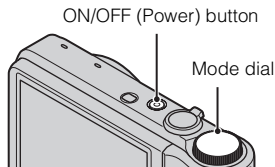
- 4 Press the shutter button fully down.

- Do not cover the part showing with the illustration.



Shooting movies

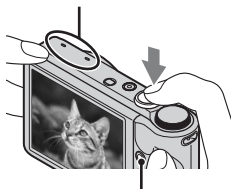
- 1 Set the mode dial to  (Movie Mode), then press the ON/OFF (Power) button.



- 2 Press the shutter button fully down to start recording.

- You can start recording also by pressing MOVIE (Movie) button.
- Do not cover the microphone.

Do not cover with your fingers.





MOVIE (Movie) button

- 3 Press the shutter button fully down again to stop recording.

Note

- The operating sound of the lens is recorded when the zoom function operates while shooting a movie.

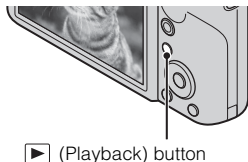
■ Changing the Movie format

Change the Movie format by MENU →  (Settings) →  (Shooting Settings) → [Movie format].



Viewing images


1 Press the (Playback) button.

- When images on a memory card recorded with other cameras are played back on this camera, the registration screen for the data file appears.






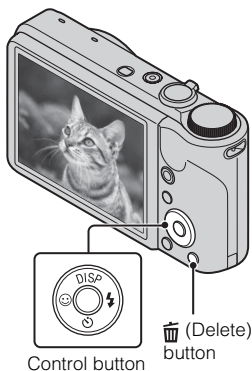
■ Selecting next/previous image

Select an image with  (next)/ (previous) on the control button.

- Press  in the center of the control button to view movies.

■ Deleting an image

- ① Press  (Delete) button.
- ② Select [This Image] with  on the control button, then press .



■ Returning to shooting images

Press the shutter button halfway down.

■ Turning off the camera

Press ON/OFF (Power) button.

Learning more about the camera

("Cyber-shot Handbook")

"Cyber-shot Handbook", which explains how to use the camera in detail, is included on the CD-ROM (supplied). Refer to it for in-depth instructions on the many functions of the camera.

■ For Windows users

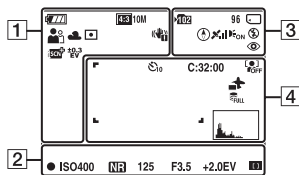
-
- 1 Turn on your computer, and insert the CD-ROM (supplied) into the CD-ROM drive.
 - 2 Click [Cyber-shot Handbook].
 - 3 Click [Install].
 - 4 Start "Cyber-shot Handbook" from the shortcut on the desktop.
-

■ For Macintosh users

-
- 1 Turn on your computer, and insert the CD-ROM (supplied) into the CD-ROM drive.
 - 2 Select the [Handbook] folder and copy "Handbook.pdf" stored in the [GB] folder to your computer.
 - 3 After copying is complete, double-click "Handbook.pdf".
-

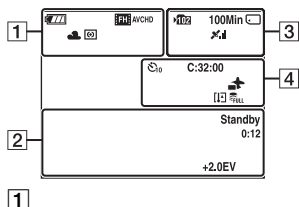
List of icons displayed on the screen

When shooting still images



- The icons are limited in Easy Shooting mode.

When shooting movies











Display	Indication
	Metering Mode
	Vibration warning
	Scene Recognition
	Burst Shooting Interval
	Bracket Shooting
	Bracket Settings
	Smile Detection Sensitivity indicator
	Zoom scaling









Display	Indication
	Battery remaining
	Low battery warning
	Image Size/Quality
	Scene Selection
	Mode dial (Intelligent Auto Adjustment/Anti Motion Blur/Hand-held Twilight/Backlight Correction HDR/Movie Mode/iSweep Panorama/Manual Exposure Shooting/Program Auto)
	Scene Recognition icon
	White balance

Display	Indication
	AE/AF lock
	ISO number
	NR slow shutter
	Shutter speed
	Aperture value
	Exposure Value
	Focus
	Recording a movie/ Standby a movie
	Recording time (m:s)

3

Display	Indication
	Recording folder
96	Number of recordable images
100Min	Recordable time
	Recording/Playback Media (Memory card, internal memory)
	Direction (DSC-HX5V only)
	GPS triangulating status (DSC-HX5V only)
	AF illuminator
	Red-eye reduction
	Flash mode
	Flash charging

4

Display	Indication
	Self-timer
C:32:00	Self-diagnosis display
	Destination
	Overheating warning
	Face Detection
	Database file full/ Database file error
	AF range finder frame
+	Spot metering cross hair
	Histogram <ul style="list-style-type: none">  appears when histogram display is disabled.

Number of still images and recordable time of movies

The number of still images and recordable time may vary depending on the shooting conditions and the memory card.

■ Still images/Panoramic images

(Units: Images)

Capacity Size	Internal memory	Memory card formatted with this camera				
	Approx. 45 MB	2 GB	4 GB	8 GB	16 GB	32 GB
10M	9	402	808	1637	3334	6588
5M	14	582	1168	2366	4819	9524
VGA	284	11760	23600	47810	97350	192380
16:9(7M)	9	400	802	1626	3311	6543
16:9(2M)	47	1960	3934	7968	16220	32060
Wide (horizontal)	12	516	1035	2096	4270	8437
Standard (horizontal)	15	625	1255	2543	5178	10230
Wide (vertical)	10	423	849	1719	3502	6920
Standard (vertical)	10	442	887	1797	3660	7232

Notes

- When the number of remaining shootable images is greater than 99,999, the “>99999” indicator appears.
- When an image shot with other cameras is played back on this camera, the image may not appear in the actual image size.

Movies

The table below shows the approximate maximum recording times. These are the total times for all movie files. Continuous shooting is possible for approximately 29 minutes.

(Units: hour : minute : second)

Capacity Quality/Size	Internal memory	Memory card formatted with this camera				
	Approx. 45 MB	2 GB	4 GB	8 GB	16 GB	32 GB
AVC HD 17M FH	—	0:14:00	0:28:30	0:58:10	1:58:50	3:55:20
AVC HD 9M HQ	—	0:28:00	0:57:00	1:56:20	3:57:50	7:50:40
MP4 12M	—	0:20:40	0:41:40	1:24:40	2:52:30	5:41:00
MP4 6M	—	0:40:40	1:21:50	2:45:50	5:37:50	11:07:50
MP4 3M	0:01:40	1:15:10	2:31:10	5:06:20	10:23:50	20:33:00

Note

- The continuous shooting time differs according to the shooting conditions (temperature, etc.). The value above apply when DISP (Screen Display Settings) is set to [Normal].

Precautions

Do not use/store the camera in the following places

- In an extremely hot, cold or humid place
In places such as in a car parked in the sun, the camera body may become deformed and this may cause a malfunction.
- Under direct sunlight or near a heater
The camera body may become discolored or deformed, and this may cause a malfunction.
- In a location subject to rocking vibration
- Near strong magnetic place
- In sandy or dusty places
Be careful not to let sand or dust get into the camera. This may cause the camera to malfunction, and in some cases this malfunction cannot be repaired.

On carrying

Do not sit down in a chair or other place with the camera in the back pocket of your trousers or skirt, as this may cause malfunction or damage the camera.

On cleaning

Cleaning the LCD screen

Wipe the screen surface with an LCD cleaning kit (sold separately) to remove fingerprints, dust, etc.

Cleaning the lens

Wipe the lens with a soft cloth to remove fingerprints, dust, etc.

Cleaning the camera surface

Clean the camera surface with a soft cloth slightly moistened with water, then wipe the surface with a dry cloth. To prevent damage to the finish or casing:

- Do not expose the camera to chemical products such as thinner, benzine, alcohol, disposable cloths, insect repellent, sunscreen or insecticide.
- Do not touch the camera with any of the above on your hand.
- Do not leave the camera in contact with rubber or vinyl for a long time.

On operating temperatures

Your camera is designed for use under the temperatures between 0 °C and 40 °C (32 °F and 104 °F). Shooting in extremely cold or hot places that exceed this range is not recommended.

On the internal rechargeable backup battery

This camera has an internal rechargeable battery for maintaining the date and time and other settings regardless of whether the power is on or off.

This rechargeable battery is continually charged as long as you are using the camera. However, if you use the camera for only short periods, it discharges gradually, and if you do not use the camera at all for about one month it becomes completely discharged. In this case, be sure to charge this rechargeable battery before using the camera.

However, even if this rechargeable battery is not charged, you can still use the camera, but the date and time will not be indicated.

Charging method of the internal rechargeable backup battery

Insert charged battery pack in the camera, and then leave the camera for 24 hours or more with the power off.

Specifications

Camera

[System]

Image device: 7.59 mm (1/2.4 type)

Exmor R CMOS sensor

Total pixel number of camera:

Approx. 10.6 Megapixels

Effective pixel number of camera:

Approx. 10.2 Megapixels

Lens: Sony G 10× zoom lens

f = 4.25 mm – 42.5 mm (25 mm –
250 mm (35 mm film equivalent))

F3.5 (W) – F5.5 (T)

While shooting movies (16:9):

30 mm – 300 mm

While shooting movies (4:3):

36 mm – 360 mm

Exposure control: Automatic exposure,

Scene Selection (11 modes)

White balance: Automatic, Daylight,

Cloudy, Fluorescent 1/2/3,

Incandescent, Flash, One Push

Signal format:

For 1080 50i: PAL color, CCIR
standards HDTV 1080/50i
specification

For 1080 60i: NTSC color, EIA
standards HDTV 1080/60i
specification

File format:

Still images: JPEG (DCF Ver. 2.0,
Exif Ver. 2.21, MPF Baseline)

compliant, DPOF compatible

Movies (AVCHD format):

AVCHD Ver. 1.0 compliant

Video: MPEG-4 AVC/H.264

Audio: Dolby Digital 2ch,
equipped with Dolby Digital Stereo
Creator

- Manufactured under license from
Dolby Laboratories.

Movies (MP4 format):

Video: MPEG-4 AVC/H.264

Audio: MPEG-4 AAC-LC 2ch

Recording media: Internal Memory
(Approx. 45 MB), “Memory Stick
Duo” media, SD memory cards

Flash: Flash range (ISO sensitivity
(Recommended Exposure Index)
set to Auto):

Approx. 0.25 m to 3.8 m (W)
(9 7/8 inches to 12 ft 5 5/8 inches)

Approx. 1.0 m to 2.6 m (T)
(3 ft 3 3/8 inches to 8 ft 6 3/8
inches)

[Input and Output connectors]

Multi use terminal Type2c

(AV-out (SD/HD Component)/
HDMI/USB/DC-in):

Video output

Audio output (Stereo)

USB communication

USB communication: Hi-Speed USB
(USB 2.0 compliant)

[LCD screen]

LCD panel: 7.5 cm (3.0 type) TFT
drive

Total number of dots: 230 400 (960 ×
240) dots

[Power, general]

Power: Rechargeable battery pack
NP-BG1, 3.6 V

NP-FG1 (sold separately), 3.6 V
AC-LS5 AC Adaptor (sold
separately), 4.2 V

Power consumption (during shooting):
1.1 W

Operating temperature: 0 °C to 40 °C
(32 °F to 104 °F)
Storage temperature: -20 °C to +60 °C
(-4 °F to +140 °F)
Dimensions: 102.9 × 57.7 × 28.9 mm
(4 1/8 × 2 3/8 × 1 3/16 inches)
(W/H/D, excluding protrusions)
Mass (including NP-BG1 battery pack,
Memory card): Approx. 200 g
(7.1 oz.)
Microphone: Stereo
Speaker: Monaural
Exif Print: Compatible
PRINT Image Matching III:
Compatible
PictBridge: Compatible

BC-CSGD/BC-CSGE battery charger


Power requirements: AC 100 V to
240 V, 50/60 Hz, 2 W
Output voltage: DC 4.2 V, 0.25 A
Operating temperature: 0 °C to 40 °C
(32 °F to 104 °F)
Storage temperature: -20 °C to +60 °C
(-4 °F to +140 °F)
Dimensions: Approx. 55 × 24 × 83 mm
(2 1/4 × 3 1/32 × 3 3/8 inches)
(W/H/D)
Mass: Approx. 55 g (1.9 oz.)

Rechargeable battery pack NP-BG1

Used battery: Lithium-ion battery
Maximum voltage: DC 4.2 V
Nominal voltage: DC 3.6 V
Maximum charge current: 1.44 A
Maximum charge voltage: DC 4.2 V
Capacity:
 typical: 3.4 Wh (960 mAh)
 minimum: 3.3 Wh (910 mAh)

Design and specifications are subject to
change without notice.

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